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ENVIRONMENTAL ASSESSMENT

Docket RSPA-02-13658 (HM-215E) - 6

Harmonization with the United Nations Recommendations, International
Maritime Dangerous Goods Code, and International Civil Aviation
Organization's Technical Instructions

November, 2002

Environmental Assessment
for
Notice of Proposed Rulemaking (NPRM)
Harmonization with the United Nations Recommendations, International Maritime Dangerous
Goods Code, and International Civil Aviation Organization's Technical Instructions,
RSPA-02-13658 (HM-215E)

Background

The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to consider the consequences of major Federal actions and prepare a detailed statement on actions significantly affecting the quality of the human environment. We are proposing revisions to the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) to maintain alignment with international transportation standards by incorporating various changes to proper shipping names, hazard classes, packing groups, special provisions, packaging authorizations, air transport quantity limitations, and vessel stowage requirements. We developed this assessment to determine the effects of these revisions on the environment and whether a more comprehensive environmental impact statement may be required.

Purpose of Proposed Action

Transportation of hazardous materials in commerce is subject to requirements in the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180), issued under authority of Federal hazardous materials transportation law, codified at 49 U.S.C. 5101 *et seq.* To facilitate the safe and efficient transportation of hazardous materials in international commerce, the HMR provide that both domestic and international shipments of hazardous materials may be offered for transportation and transported under provisions of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions), the International Maritime Dangerous Goods Code (IMDG Code), and the Transport of Dangerous Goods (TDG) regulations promulgated by Transport Canada, as appropriate. Basic requirements of the HMR, the ICAO Technical Instructions, the IMDG Code, and the TDG regulations are based on the United Nations Recommendations on the Transport of Dangerous Goods (UN Recommendations).

For ease of compliance with appropriate regulations, carriers engaged in the transportation of hazardous materials by aircraft generally elect to comply with the ICAO Technical Instructions, while vessel operators generally elect to comply with the IMDG Code. In so doing, carriers are able to train their hazmat employees in a single set of requirements for the classification, packaging, communication of hazards, handling, stowage, and the like, thereby minimizing the possibility of improperly transporting a shipment of hazardous materials because of differences in national regulations. Similarly, many shippers find that consistency in regulations for the transportation of hazardous materials aids their understanding of what is

required, thereby permitting them to more easily comply with these safety regulations when shipping hazardous materials in international commerce.

The continually increasing amount of hazardous materials transported in international commerce warrants the harmonization of domestic and international transportation requirements to the greatest extent possible. Harmonization serves to facilitate international transportation while assuring the protection of people, property, and the environment. Therefore, we are proposing to revise the HMR to incorporate changes adopted in the twelfth revised edition of the UN Recommendations, the 2003-2004 edition of the ICAO Technical Instructions, and Amendment 31 to the IMDG Code. The international standards become effective on January 1, 2003.

Description of Action

We are proposing the following changes to the HMR:

- Amendments to the Hazardous Materials Table (HMT) to add, revise, or remove certain proper shipping names, hazard classes, packing groups, special provisions, packaging authorizations, bulk packaging requirements, passenger and cargo aircraft maximum quantity limitations, and vessel stowage provisions.
- Addition of a requirement to indicate types of packagings on shipping papers.
- Addition of a requirement to enter the subsidiary hazard class or subsidiary division number on shipping papers.
- Addition of an air eligibility marking requirement.

Alternatives Considered

As discussed above, aligning the HMR with international standards increases the level of safety, resulting in the protection of people, property and the environment. In developing this rule, we considered three alternatives:

- (1) Do nothing.
- (2) Adopt only certain revisions proposed in the NPRM.
- (3) Adopt the applicable changes in their entirety as proposed in the NPRM.

Alternative (1). Because our goal is to further facilitate the safe transportation of hazardous materials in international commerce, we rejected the do-nothing alternative.

Alternative (2). After a comprehensive review of the new international requirements, we

determined that piecemeal adoption of the international standards would not facilitate international trade and could have a detrimental impact on safety insofar as shippers would be required to comply with two different sets of transportation requirements. Therefore, we rejected Alternative (2).

Alternative (3). This is the selected alternative. Incorporating the international revisions in their entirety facilitates international trade and transportation efficiency and has a positive impact on safety.

Environmental Consequences

Hazardous materials are transported by aircraft, vessel, rail, and highway. The potential for environmental damage or contamination exists when packages of hazardous materials are involved in accidents or en route incidents resulting from cargo shifts, valve failures, package failures, or loading, unloading, or handling problems. The ecosystems that could be affected by a release include air, water, soil, and ecological resources (for example, wildlife habitats). The adverse environmental impacts associated with releases of most hazardous materials are short-term impacts that can be greatly reduced or eliminated through prompt clean-up of the accident scene. Most hazardous materials are not transported in quantities sufficient to cause significant, long-term environmental damage if they are released.

The hazardous material regulatory system is a risk management system that is prevention-oriented and focused on identifying a hazard and reducing the probability and quantity of a hazardous material release. Hazardous materials are categorized by hazard analysis and experience into hazard classes and packing groups. The regulations require each shipper to classify a material in accordance with these hazard classes and packing groups; the process of classifying a hazardous material is itself a form of hazard analysis. Further, the regulations require the shipper to communicate the material's hazards through use of the hazard class, packing group, and proper shipping name on the shipping paper and the use of labels on packages and placards on transport vehicles. Thus the shipping paper, labels, and placards communicate the most significant findings of the shipper's hazard analysis. A hazardous material is assigned to one of three packing groups based upon its degree of hazard, from a high hazard, Packing Group I to a low hazard, Packing Group III material. The quality, damage resistance, and performance standards of the packaging in each packing group are appropriate for the hazards of the material transported.

Revisions to the Hazardous Materials Table (HMT). In this NPRM, we are proposing to add, revise, or remove certain proper shipping names, hazard classes, packing groups, special provisions, packaging authorizations, bulk packaging requirements, passenger and aircraft maximum quantity limitations, and vessel stowage provisions. We are proposing to add several new entries to the HMT and delete a number of entries for materials that are no longer transported in substantial quantities. In addition, we are proposing to revise or add special provisions that apply to certain entries to clarify their use and more accurately identify their

hazards. Many of these proposed revisions will improve the accuracy of the shipping descriptions applicable to specific hazardous materials, providing for a more accurate and complete indication of the hazards related to a specific shipment. Overall, the revisions to the HMT will result in improved hazard communication for many hazardous materials, thereby enabling transportation workers and emergency response personnel to quickly and efficiently identify hazards and mitigate potential risks to the public and the environment.

Changes to shipping paper requirements. In the NPRM, we are proposing to require an indication on the shipping paper of the types of packages, such as drums, boxes, jerricans, or cylinders, being used to transport hazardous materials. We are also proposing to require the subsidiary hazard class or subsidiary division number(s) to be entered following the primary hazard class or division number on shipping papers for all modes of transportation. Currently, these requirements are applicable only to vessel shipments. Adoption of these revisions will provide effective tools for identification of the hazards associated with a specific shipment by hazardous material employees, thereby alerting them to specific handling requirements. Further, these revisions will enable emergency responders to more quickly and efficiently identify hazards, thereby improving response to incidents, facilitating more effective response measures, and reducing the possibility of an adverse environmental impact that could result from an accident during transportation.

Air eligibility marking. We are proposing to require a new marking for non-bulk packages offered for transportation or transported by aircraft. The air eligibility marking should help to improve the safe transportation by air of hazardous materials. It will represent a shipper's certification that all applicable transportation requirements for air transport have been met, such as, pressure differential requirements, package markings and labels, inner packaging limits, selection of appropriate types of packagings, use of closure instructions for inner packagings, application of the cargo aircraft handling label, when applicable, and proper classification. The use of an air eligibility mark should help to heighten shipper awareness of specific transportation requirements for air shipments and reduce the inadvertent acceptance for transportation by aircraft of packages that conform only to highway, rail or vessel requirements. Improved conformance with air transportation requirements will reduce the possibility of an accidental release of a hazardous material on board an aircraft. The proposed requirement may have a positive impact on the environment by reducing the risk of an air accident involving hazardous materials.

Conclusion

Based on the foregoing analysis, we have determined that there are no significant environmental impacts associated with this NPRM.

List of Agencies and Persons Consulted

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